

1 **What Is claimed is:**

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3 1. Network management system

4 comprising a network management master-agent process

5 having

6 a first interface being adapted to communicate with

7 a network management software module using a

8 network management protocol format;

9 a second interface being adapted to communicate

10 with a plurality of network management sub-agent

11 processes using an object-oriented interface

12 description language format;

13 the network management master-agent process further

14 comprising a converting unit for converting

15 a message according to the network management

16 protocol format into the object-oriented interface

17 description language format;

18 a message according to the object-oriented

19 interface description language format into the

20 network management protocol format.

21

22 2. Network management system according to claim 1, further

23 comprising a network management software module coupled to

24 the network management master-agent process via the first

25 interface.

26

27 3. Network management system according to claim 2, wherein

28 the network management software module comprises a graphical

29 user interface for presenting network management information

30 to a user.

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32 4. Network management system according to claim 1, wherein

33 the network management protocol is the Simple Network

34 Management Protocol or the Simple Network Management Protocol

35 Version 2.

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- 1 5. Network management system according to claim 1, wherein
2 the object-oriented interface description language is the
3 Common Object Request Broker Architecture.
4
- 5 6. Network management system according to claim 1, further
6 comprising a plurality of network management sub-agent
7 processes coupled to the network management master-agent
8 process via the second interface.
9
- 10 7. Network management system according to claim 6, further
11 comprising one Management Information Base for each network
12 management sub-agent process
13 wherein each Management Information Base is coupled to the
14 network management sub-agent process;
15 wherein each Management Information Base is designed for
16 specifying the structure of management information in
17 terms of the objects to be managed (predefined
18 variables) of an application to be monitored.
19
- 20 8. Network management system according to claim 7, wherein at
21 least one of the Management Information Bases is defined in
22 the Abstract Syntax Notation code.
23
- 24 9. Network management system according to claim 8, wherein at
25 least one of the network management sub-agent processes
26 comprises a further conversion unit for converting data of a
27 Management Information Base specified by a user in Extensible
28 Markup Language format into the Abstract Syntax Notation
29 format.
30
- 31 10. Network management system according to claim 9, wherein
32 at least one of the network management agent processes is
33 operated on a Hewlett-Packard UNIX operating system.
34
- 35 11. Computer-based method for network management, comprising
36 the following steps:
37 Receiving a request message in a network management

1 protocol format from a network management software
2 module by a network management master-agent process;
3 Converting the request message from the network management
4 protocol format into an object-oriented interface
5 description language format;
6 Sending the converted request message in the object-
7 oriented interface description language format to at
8 least one network management sub-agent process.

9
10 12. Computer-based method for network management according to
11 claim 11, wherein the network management protocol is the
12 Simple Network Management Protocol or the Simple Network
13 Management Protocol Version 2.

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15 13. Computer-based method for network management according to
16 claim 11, wherein the object-oriented interface description
17 language is the Common Object Request Broker Architecture.

18
19 14. Computer-based method for network management according to
20 claim 11, comprising the further step of determining the sub-
21 agent process from the plurality of sub-agent processes which
22 is responsible for the request message, wherein the criterion
23 for determining the responsible sub-agent process is an
24 Object Identifier managed by the sub-agent process.

25
26 15. Computer-based method for network management according to
27 claim 14, comprising the further step that data of a
28 Management Information Base specified by a user in Extensible
29 Markup Language format is converted by a sub-agent process
30 into the Abstract Syntax Notation format.

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32 16. Computer-based method for network management according to
33 claim 11, wherein at least one of the network management
34 agent processes is operated on a Hewlett-Packard UNIX
35 operating system.

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1 17. Computer-based method for network management, comprising
2 the following steps:

3 Receiving a response message in an object-oriented
4 interface description language format from a network
5 management sub-agent process by a network management
6 master-agent process;
7 Converting the response message from the object-oriented
8 interface description language format into a network
9 management protocol format;
10 Sending the converted response message in the network
11 management protocol format to a network management
12 software module.

13
14 18. Computer-based method for network management according to
15 claim 17, further comprising the following steps to be
16 carried out before carrying out the steps of claim 17:

17 Receiving the value of the Management Information Base
18 variable from the user application after it processes
19 the request;
20 Sending the response message in the object-oriented
21 interface description language format to the network
22 management master-agent process.

23
24 19. Computer-based method for network management according to
25 claim 18, wherein the network management protocol is the
26 Simple Network Management Protocol or the Simple Network
27 Management Protocol Version 2.

28
29 20. Computer-based method for network management according to
30 claim 17, wherein the object-oriented interface description
31 language is the Common Object Request Broker Architecture.

32
33 21. Computer-based method for network management according to
34 claim 18, wherein the Management Information Base is designed
35 for specifying the structure of management information in
36 terms of the objects to be managed (predefined variables) of
37 an application to be monitored.

1 22. Computer-based method for network management according to
2 claim 18, wherein the Management Information Base is defined
3 in the Abstract Syntax Notation code.

4

5 23. Computer-based method for network management according to
6 claim 22, comprising the further step that data of a
7 Management Information Base specified by a user in Extensible
8 Markup Language format is converted by a sub-agent process
9 into the Abstract Syntax Notation format, wherein the further
10 step is carried out before carrying out the steps of claims
11 18 and 17.

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13 24. Computer-based method for network management according to
14 claim 17, wherein at least one of the network management
15 agent processes is operated on a Hewlett-Packard UNIX
16 operating system.

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